National Institute of Environmental Health Sciences

Health impacts of the July 2010 heat wave in Quebec, Canada

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Abstract:

BACKGROUND: One of the consequences of climate change is the increased frequency and intensity of heat waves which can cause serious health impacts. In Quebec, July 2010 was marked by an unprecedented heat wave in recent history. The purpose of this study is to estimate certain health impacts of this heat wave. METHODS: The crude daily death and emergency department admission rates during the heat wave were analyzed in relation to comparison periods using 95% confidence intervals. RESULTS: During the heat wave, the crude daily rates showed a significant increase of 33% for deaths and 4% for emergency department admissions in relation to comparison periods. No displacement of mortality was observed over a 60-day horizon. CONCLUSIONS: The all-cause death indicator seems to be sufficiently sensitive and specific for surveillance of exceedences of critical temperature thresholds, which makes it useful for a heat health-watch system. Many public health actions combined with the increased use of air conditioning in recent decades have contributed to a marked reduction in mortality during heat waves. However, an important residual risk remains, which needs to be more vigorously addressed by public health authorities in light of the expected increase in the frequency and severity of heat waves and the aging of the population.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3554487

Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified, Urban

Geographic Location: ☑

resource focuses on specific location

Non-United States, United States

Non-United States: Non-U.S. North America

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Injury, Morbidity/Mortality, Other Health Impact

Other Health Impact: emergency department visits

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content